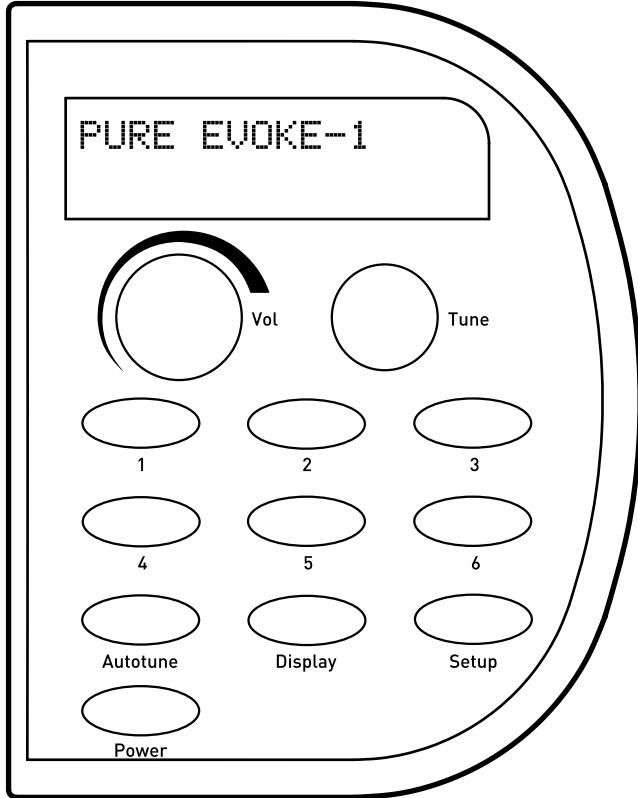


EVOKE - 1

Owner's manual



PURE
DIGITAL

Safety instructions



- Keep the radio away from heat sources.
- Do not use the radio near water.
- Avoid objects or liquids getting into the radio.
- Do not remove screws from or open the radio casing.
- Unplug the power adapter from the wall if the radio will not be used for a long period.

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Credits

This manual was written by Bruce Murray and illustrated by Nick Noble. It is a product of PURE Digital, Imagination Technologies Ltd., Home Park Estate, Kings Langley, Hertfordshire WD4 8LZ, UK.

Issue 2 September 2002

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Introduction

Thank you for choosing the PURE EVOKE-1 digital radio.

This owner's manual provides information on setting up your unit, instructions on using it and details of the accessories and support available.

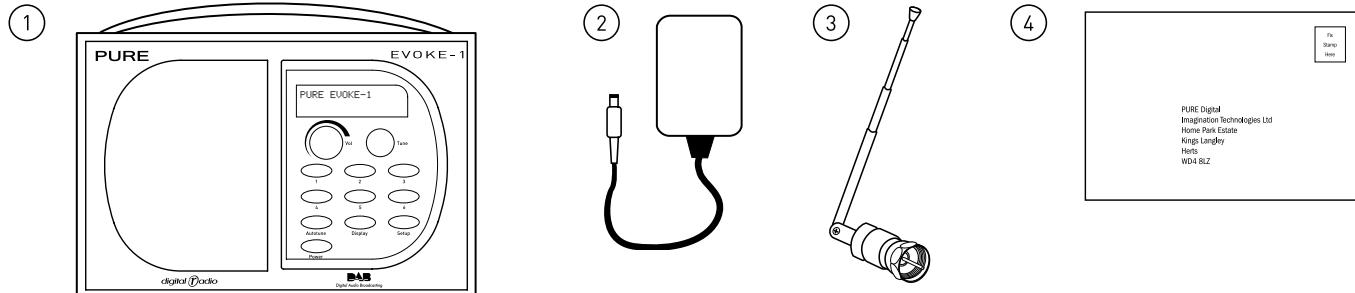
The EVOKE-1 is a mains-powered stand-alone portable radio for your bedroom, kitchen, study or just about anywhere. EVOKE-1 contains a high performance, full range speaker housed in a wood cabinet with bass port for superb audio quality.

Using real wood veneer and quality construction, the EVOKE-1 is beautifully finished and sounds as good as it looks. A line level output enables you to connect to an external amplifier or record programmes, a headphone socket and an auxiliary speaker output enabling connection of a secondary speaker unit for full stereo reproduction are also provided.

If you are new to digital radio see our quick guide on page 14.

Unpacking

This section lists the contents of your EVOKE-1 package. Contact us if any items are missing or damaged.

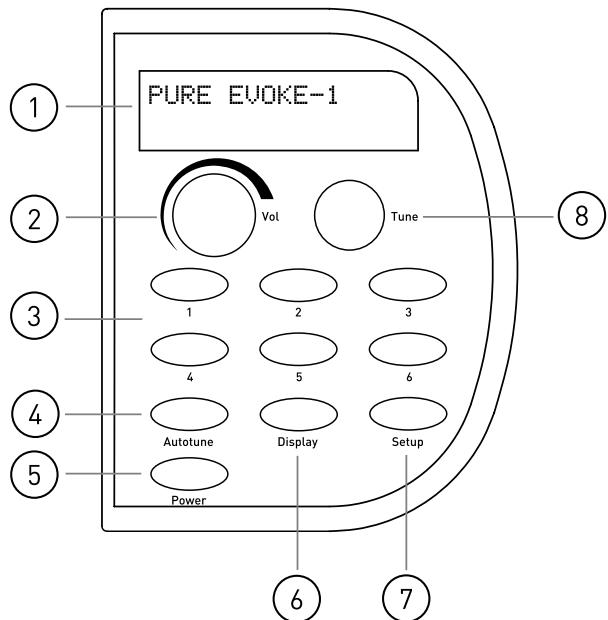


- ① EVOKE-1 digital radio unit.
- ② 230V AC to 12V DC Mains Power adapter.
- ③ Removable telescopic aerial (fitted to unit).
- ④ Warranty registration card.

Controls and Connectors

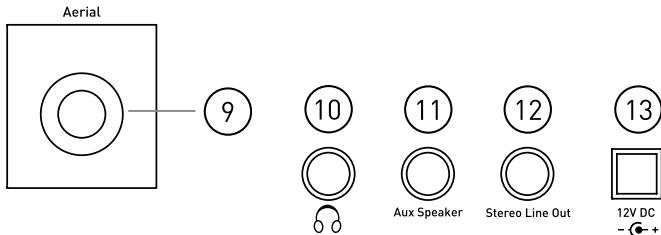
This section provides information on the controls and connectors available on the front and rear panels of your EVOKE-1.

Front Panel



- ① **Backlit LCD display**
- ② **Vol** knob adjusts the volume
- ③ **Preset** buttons (1-6) for up to six stations, see page 10
- ④ **Autotune** button provides one touch tuning, see page 8
- ⑤ **Power** on/off button
- ⑥ **Display** button changes the text shown on the bottom line of the display, see page 9
- ⑦ **Setup** button enables access to advanced setup options, see page 11
- ⑧ **Tune** turn to scroll through and push to select digital radio stations and menu options, see pages 9 and 11

Rear Panel



- ⑨ **Aerial** socket for connection to the supplied telescopic or other aerial
- ⑩ **Headphone** socket (3.5mm) for connection to headphones
- ⑪ **Aux Speaker** socket (3.5mm) for connection to the optional ST-1 speaker for full stereo output
- ⑫ **Stereo Line Out** socket (3.5mm) analogue output for connection to an external amplifier or recorder
- ⑬ **12V DC** for connection to mains adapter

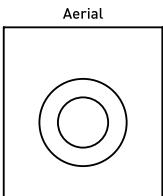
Quick start

This section provides information on how to set up and start using your EVOKE-1. For further details on using your radio see *Connecting to other devices* on page 5 and *Using your EVOKE-1* on page 7.

1. Fully extend the telescopic aerial.
2. Attach the mains adapter and plug in to your power supply.
3. Push the **Power** button to switch the unit on. The LCD will light up and the display will show 'PURE EVOKE-1' and a progress bar on the bottom line indicates the progress of an autotune to find the stations available in your area. If no stations are found you will be presented with a series of options which you can use to retry the tuning process or and adjust your aerial position, see *Tuning for the first time* on page 7. The stations found will be stored in alphanumeric order and the first station on the list will be selected.
4. Adjust the **Vol** control if necessary to hear it.
5. Turn the **Tune** knob to see all the stations available and push to select and listen to another station.

Connecting to other devices

This section provides information on connecting your aerial and connecting to any other devices. Connector sockets are provided on the rear panel of your EVOKE-1. Before connecting other devices to your EVOKE-1, switch both devices off. For a quick setup you can connect just your power supply and aerial – the other connections listed are optional and will not prevent normal operation of the unit.



Connecting to an aerial

The supplied telescopic aerial enables to your EVOKE-1 to receive digital radio transmissions. If you find that the telescopic aerial does not provide good reception you can remove this aerial and connect an alternative DAB aerial. For information on aerial types and positioning see *Aerial advice* on page 17. To find out about DAB coverage in your area, see the list of useful addresses on page 15.

1. Unscrew the large nut on the end of the telescopic aerial to remove the aerial from the **Aerial** socket. **Note** Take care not to unscrew the thin nut behind that holds the aerial connector itself in place.
2. Screw the aerial plug of your replacement aerial onto the **Aerial** connector on the rear of your digital radio.

You may have to experiment with different aerial positions to find the best reception for particular services. Just like with FM reception, you may find that you want to move the radio around your living space to find the best location for reception – near a window may provide better reception.



Connecting to an external amplifier

You can connect your EVOKE-1 to an external amplifier. This may be a stand alone unit or it may be built into your existing hi-fi system or powered speakers.

Connect the **Stereo Line Out** socket to the Tuner-in socket on the back of your amplifier using a 3.5mm to stereo phono cable.



Stereo Line Out

Connecting to an external recorder

You can connect your EVOKE-1 to an external recording device. This may be a stand alone unit such as a tape recorder or Mini Disc recorder or it may be built into your existing hi-fi system.

Connect the **Stereo Line Out** socket to the Line-in socket on the back of your recorder using a suitable cable.



Aux Speaker

Connecting an auxiliary speaker

You can connect a second unpowered speaker to your EVOKE-1 radio using the **Aux Speaker** socket. This enables full stereo reproduction. Call us on 01923 277488 to find out more or visit our website at www.pure-digital.com to purchase a matching ST-1 auxiliary speaker.



Connecting to headphones

You can connect a set of stereo headphones to your EVOKE-1 radio using the \circlearrowright headphones socket.



12V DC
- - +

Connecting to power supply

Once you have made all other connections, connect the supplied power lead to the socket on the side of your digital radio and plug the power adapter into a wall outlet.

Using your EVOKE-1

This section provides information on using your EVOKE-1 including tuning, selecting a station and altering the displayed information.



Power

Switching on and off

Before switching on for the first time, check all connections, extend your aerial fully and ensure that the volume is turned down.

Push and release the **Power** button to switch the unit on or off. The LCD screen will light up when the unit is on.



Autotune



Tune

Tuning

Tuning the EVOKE-1 is very simple. When you first switch on the unit it will start an automatic tuning process described below in *Tuning for the first time*. You may want to re-tune the unit at a later date if you move the unit to a different room or if you want to receive a newly introduced multiplex – see *Retuning your unit* on page 8.

Tuning for the first time

When you switch on your EVOKE-1 for the first time an autotune process will be performed automatically. A progress indicator on the display shows that autotune is underway.

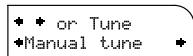
If stations are found during the autotune

The stations will be stored in alphanumeric order. The first station on the list will be selected and you will hear it through the speaker. To listen to other stations, see *Selecting a station* on page 9.

If no stations are found during the autotune

'No stations available' will be shown on the display for a few seconds and then you see a menu of options.

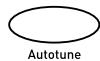
Use the **Tune** knob to scroll through the following options and push it to select that option.



Manual tune - See *Manual tune* on page 12 for details of using the manual tuning option to improve reception.

Autotune local - See *Retuning your unit* below for details of the local autotune option.

Autotune full - See *Retuning your unit* below for details of the full autotune option.



Retuning your unit

You can re-tune your unit at any time using the autotune process. You may wish to do this if a new multiplex is launched or you move your unit to another room. You do not need to perform an autotune to pick up new stations within a multiplex you are listening to as your EVOKE-1 monitors and refreshes the list of available stations automatically. The following two options are available:

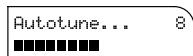
Autotune local - scans all frequencies in the UK channel allocation. This should only take a few seconds.

Autotune full - scans the full range of digital frequencies in Band III. This may take a minute or more.

1. Ensure your EVOKE-1 is switched on and the aerial is connected and fully extended.
2. Push and release the **Autotune** button once for local scan or hold down for around two seconds for a full scan.
Note You can cancel Autotune by pushing the **Autotune** button again during the tuning process.

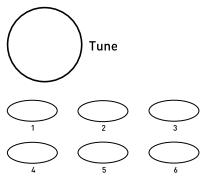
The display will indicate tuning is underway. When finished, the EVOKE-1 will return to the station you were listening to and you will hear it through the speakers. All the stations found are now stored in the unit and you can select another station as described in *Selecting a station* on page 9.

If no stations are found, you see the message 'No stations available' and the display shows an option menu, see *If no stations are found during the autotune* on page 7 for details of this menu. Check your aerial is fully extended and try one of the available tuning options.



Adjusting the volume

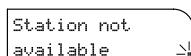
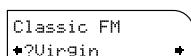
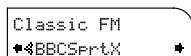
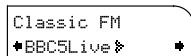
Once you have tuned your EVOKE-1 as explained above you can adjust the volume using the **Vol** knob.



Selecting a station

Once you have tuned your EVOKE-1 you select the digital radio station you want to listen to using the **Tune** knob. If you have assigned stations to presets you can also select them directly by pressing the relevant numbered button (1-6), see *Storing and recalling presets* on page 10.

1. The top line of the display shows the name of the currently selected station. Rotate the **Tune** knob to see the names of other stored stations on the bottom line of the display. Stop when you find the station to which you want to listen.
2. Push and release the **Tune** knob to listen to the station you have selected. The display may show 'Now tuning...' briefly as it finds the new station.



If a station has one or more secondary services available the display will show '>>' next to the station name on the station list and they will appear after the primary service as you turn the **Tune** knob.

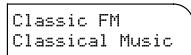
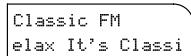
A secondary service will display '<<' before the station name on the station list indicating that it belongs to the primary service before it in the list. See page 14 for information on primary and secondary services.

If the station has '?' before its name the service is currently inactive or invalid. If you select a station which has this symbol the EVOKE-1 tries to tune to that station. If still unavailable 'Station not available' or 'Station off-air' will be displayed and EVOKE-1 will attempt to tune to an alternative station. A flashing cursor will indicate that this is underway. If you want to try to manually tune to this station you have five seconds after the message in which to push the **Tune** button and the manual tuning bar will be displayed enabling you to adjust your aerial, see page 12 for details.

Changing the display mode

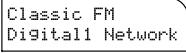
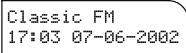
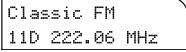
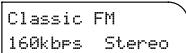
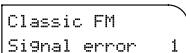
EVOKE-1 has six display modes which enable you to view parts of the broadcast data on the bottom line of the display.

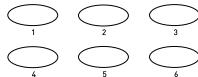
Press the **Display** button and repeat to cycle through the six different display modes.



Scrolling text The default mode, displays scrolling text messages which accompany the audio, where available.

Program Type A label describing the type of content being broadcast by the service.

	Multiplex name	Displays the name of the multiplex in which the current service is found, see <i>Guide to Digital Radio</i> on page 14 for more information on multiplexes.
	Date and time	Displays the date and time obtained from the current multiplex.
	Channel	Displays the channel identifier and frequency for the station to which you are tuned, see <i>Guide to Digital Radio</i> on page 14 for more information.
	Mode	Displays the mode of the current service, Stereo or Mono and the data rate at which the audio signal is being transmitted. This rate is set by the broadcaster to suit the type and quality of material being transmitted.
	Signal error	Displays the signal error rate for the signal to which you are tuned. As a guide values from 0 to 15 indicate good reception, 16 to 30 borderline reception and 31 or more, poor reception. You can attempt to reduce this signal error rate by adjusting your aerial position using <i>Manual tune</i> option described on page 12.



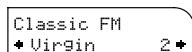
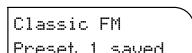
Storing and recalling presets

The numbered buttons **(1-6)** enable you to store radio stations for one-touch access.

To store a station

You can store a station to a preset while listening it or when you see the station name on the bottom line of the display while scrolling through the station list.

Press and hold down a numbered button for around two seconds to store the station under that number. The display shows e.g. 'Preset 1 saved' when the station has been successfully saved. Once you save a station to a preset, the station name has the preset number next to it on the station list.



To recall a previously stored station

Press and release the numbered button under which you stored the station. If the selected preset is empty the display shows 'Preset empty' for a few seconds and you continue listening to the currently selected station.



Setup



Tune

Advanced setup options

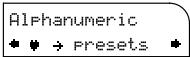
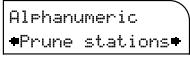
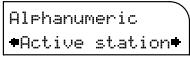
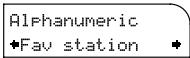
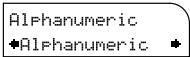
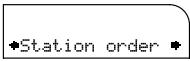
The EVOKE-1 has a number of advanced features which enable you to change the order and number of stations on the station list, perform manual tuning, apply Dynamic Range Control (DRC) and view the software version.

Press the **Setup** button to enter the advanced setup menu, turn the **Tune** knob to scroll through the following menu options then push the **Tune** knob to select that option.

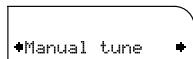
Station Order

This option enables you to choose the order in which stations appear as you scroll through the station list.

When you select this option you see the currently selected order on the top row of the display and a scroll list on the bottom. Turn the **Tune** knob to scroll through the following options and push the **Tune** knob to select one:

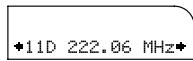


- | | |
|----------------|--|
| Alphanumeric | Displays all stations in alphanumeric order. This is the default setting. |
| Fav station | Displays the six most listened to stations at the top of the station list in alphanumeric order and the rest below in alphanumeric order. Your favourite stations will be displayed with a next to the station name when you scroll through the station list. |
| Active station | Displays active stations at the top of the service list in alphanumeric order and inactive ones at the bottom in alphanumeric order. See <i>Selecting a station</i> on page 9 for information on active stations. |
| Prune stations | Removes inactive stations from the station list. See <i>Selecting a station</i> on page 9 for information on active stations. |
| → presets | Available only when Fav station order (above) has been selected. Transfers your six favourite stations to the preset buttons. See page 10 for information on using presets. |



Manual tune

This option provides a signal level display which you can use to find the best position for your radio and aerial.



1. Turn the **Tune** knob to scroll through different channels and push the **Tune** knob to select one. **Note** The list includes all channels, UK stations are in the range 11B to 12D. You see a signal level display. The empty block indicates the minimum required level for reception and the solid blocks indicate the current level.
2. Move your aerial or radio whilst watching the display and to try to raise the current level to the empty block or beyond. The display will change to show the multiplex name on the bottom line of the display once a good signal is received and the multiplex will be added to the service list.
3. Push the **Setup** button to exit manual tuning or turn the **Tune** knob to select another channel.

Note You can also display the signal level for any station you are listening to by pushing the **Tune** button.



DRC Value

DRC (Dynamic Range Control) enables you to alter the dynamic range of the received audio (dependent on broadcast material) by making the quieter sounds in a broadcast more audible. This may be useful in noisy environments or particularly quiet parts of programmes. The DRC level of a broadcast is set by a broadcaster and transmitted with the service. Changing this DRC value enables you to apply a scaling factor to this level.

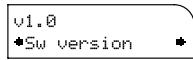


When you select this option you see the current DRC value on the top line of the display and a scroll list on the bottom. Turn the **Tune** knob to scroll through the following options and push the **Tune** knob to select one:

DRC 0 DRC scaling is switched off.

DRC ½ DRC scaling is set to ½ that sent with the transmitted service.

DRC 1 Applies the DRC scaling as sent with the transmitted service. This is the default setting.



This option enables you to view the version number of the software installed in your EVOKE-1. You may be asked to quote this if you contact Technical Support for advice. This option can only be viewed, no adjustment is available.



Setup



Tune

Resetting your EVOKE-1

A reset option is provided to enable you to reset your unit. This removes all presets, stored stations and favourite station settings and resets all options to defaults. Performing an autotune process will solve most problems but you may want to use this option if you move house or want to restore default values to options you have changed.

To select the reset option:

1. Press and hold the **Setup** button for more than two seconds. The display will show 'Press Tune to confirm reset'
2. Press the **Tune** button to confirm the reset or press no buttons for around seven seconds to cancel the reset.

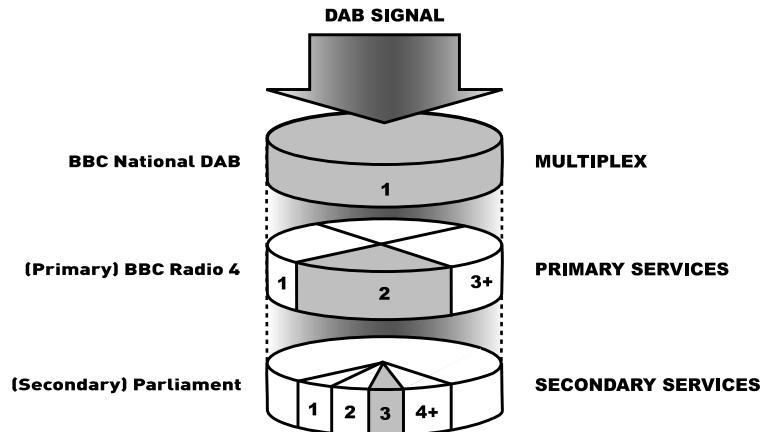
Guide to digital radio

Your EVOKE-1 enables you to receive and listen to DAB radio programmes. Digital Audio Broadcast (DAB) uses digital signals rather than traditional analogue signals enabling near CD-quality audio with virtually interference-free reception. DAB also enables broadcasters to transmit additional data along with the audio including other audio channels, text and in the future, perhaps computer data and images.

Digital radio is broadcast as groups of data called ensembles or multiplexes. Each multiplex can contain a number of stations (services) and each station contains a primary service and can contain secondary services as illustrated in the following diagram.

Each multiplex is transmitted in a set frequency range and received by your EVOKE-1 for decoding. Your EVOKE-1 enables you to receive multiplexes broadcast in frequency band III (174-240 MHz) and store the services in each multiplex for you to access. The number of multiplexes you receive will vary depending on your location. Band III is divided into 41 channels identified as 5A to 13F. Each channel can contain one multiplex. Channels allocated to the UK are in the range 11B to 12D.

Multiplexes and stations have labels (names) which are used to identify them. Instead of needing to know a particular frequency to listen to your favourite broadcast you can simply select the station name. Secondary services and additional data such as text containing programme or multiplex information are also easily accessed using your EVOKE-1.



Useful addresses

The following addresses provide additional useful information about digital radio including coverage, available services and usage tips:

BBC Digital Radio
Room 5661
Broadcasting House
Portland Place
London, W1A 1AA

tel: 08700 100 123
e-mail: digitalradio@bbc.co.uk
website: www.bbc.co.uk/digitalradio

Digital Radio Development Bureau tel: 020 7306 2630
The Radio centre e-mail: info@drdb.org
77 Shaftesbury Avenue web: www.drdb.org
LONDON, W1D 5DU

Digital One
20 Southampton Street
LONDON, WC2E 7QH

tel: 020 7288 4600
e-mail: info@digitalone.co.uk
web: www.ukdigitalradio.com

Troubleshooting

This section gives some of the most likely solutions to problems you might have with your EVOKE-1.

I can't get any sound

Make sure your EVOKE-1 is plugged in and switched on as explained on page 7.

Check that the volume is not set too low, see page 8 for details.

Ensure that you have completed the Autotune procedure to find digital radio stations as explained on page 7.

Display says 'No stations available'

Check that your aerial is connected and fully extended. Use the Autotune facility to search for services, see page 7. Try using manual tuning to adjust your aerial or radio position, see page 12.

I can't access secondary services

At the time of publishing not many secondary services are available. If secondary services are available for the currently selected station the secondary '>>' indicator will be shown on the display next to the station name, see page 9.

Display says 'Station off-air'

This may occur if a broadcaster takes a station off-air whilst you are listening to it. If your radio is tuned to a secondary service EVOKE-1 re-tunes to the associated primary service. If tuned to a primary service, EVOKE-1 will wait until the service resumes or you can choose a new station.

I can't hear the station I have selected on the display

The top line of the display shows the currently selected station. To change station you need to scroll the station list displayed on the bottom line of the display and confirm your selection by pressing the **Tune** knob, as described on page 9.

I hear a 'burbling' sound on some stations

Although DAB is excellent at providing quality audio from very little signal, the quality can suffer if the signal strength is too low. If that happens, a 'burbling' sound can sometimes be heard.

To help reduce this, check that your aerial is fully extended and upright. If the problem persists try moving your EVOKE-1 or repositioning your aerial using the signal level display described on page 12. See page 18 for additional advice on aerials.

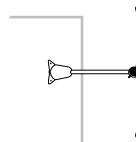
For the latest troubleshooting information visit the EVOKE-1 support section on our website at www.pure-digital.com.

Aerial advice

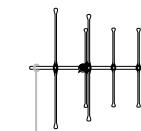
Your EVOKE-1 is supplied with a telescopic DAB aerial. This is an indoor aerial which is designed to give good reception in areas with good to moderate DAB signal strength. In areas with poor DAB coverage or poor signal strength you may want to consider using a loft mounted or external aerial. To find out about coverage in your area contact one of the organisations listed on page 15.

The following options may help you improve reception in your area. A range of DAB aerials are available from our website, see page 18.

- Telescopic Aerial** Optimise the position of your telescopic aerial by extending it as high as possible and pointing it vertically. Use manual tuning to fine tune the aerial placement, see page 12.
- TV/FM Aerial** If you have an externally mounted TV or FM aerial it may provide a stronger signal than an indoor aerial but as they are not tuned for the digital radio frequency range and are pointed at your local TV/FM transmitter, reception may be no better. The standard TV or FM RF connector cannot be plugged into your EVOKE-1 directly, you will need to use an RF to F-type adapter. You may also find that you need to use a signal booster if you want to use the aerial for both TV or FM and DAB reception.
- External or loft mounted DAB Aerial** Two main types are used. These types of aerials may require professional installation:
 - Dipole** – for use in marginal signal areas, this type is omnidirectional and should increase the strength of all DAB stations being received.
 - 4-element aerial** – for use in marginal or poor signal areas, this type is directional and has high gain. Like a TV or FM aerial this type needs to point at the transmitter. Installation requires someone to move the aerial while you use manual tuning to monitor signal level. If you receive signals from multiple transmitters you should point your aerial at the one which gives the best signal for the services to which you want to listen.
- Signal booster** This is a signal amplifier which connects into an aerial cable and boosts the strength of the received signal. If your aerial provides marginal reception, even after adjusting its position, a booster may improve your reception.



Dipole Aerial



4-element Aerial

Getting help

The Troubleshooting section of this manual, on page 16, lists some of the more likely reasons for problems you might have with your EVOKE-1. If you still have a problem with your unit, either visit our website at www.pure-digital.com or contact us using the details below for the latest support information.

PURE Digital,

Imagination Technologies Ltd,

Home Park Estate,
Kings Langley,
Herts., WD4 8LZ, UK

01923 277477 telephone
01923 270188 fax
support@pure-digital.com e-mail

Accessories



PURE Digital supply a range of accessories and complementary products for your EVOKE-1 including the matching ST-1 auxiliary speaker for stereo output, external aerials, signal boosters, audio cables and adapters.

Visit our website at www.pure-digital.com or call us on 01923 277488 to find out more.

Warranty information

Imagination Technologies Ltd. warrants to the end user that this product will be free from defects in materials and workmanship in the course of normal use for a period of two years from the date of purchase.

Please return your warranty card to register your product with us.

Should you have a problem with your unit please contact your supplier or contact PURE Digital Support at the address on the rear cover of this manual.

Technical specifications

This section lists the technical specifications for the EVOKE-1.

General	Stereo digital radio (stereo output possible with auxiliary speaker) with full Band III reception capability, for reception of all UK DAB broadcasts. Fully compliant with ETS 300 401 and capable of decoding all DAB transmission modes 1-4. Analogue stereo output and headphone socket.
Speaker	Single 3 inch co-axial speaker
Frequency Range	Band III (174 - 240 MHz), with fast Autotune feature
Tuner Sensitivity	-96 dBm
Input connectors	RF F-connector 75 Ω for DAB aerial connection (telescopic aerial supplied)
Output connectors	3.5mm for stereo analogue audio output, headphones and stereo for auxiliary speaker
Controls	Power on/off, Tune, Autotune, Display, Setup, Volume, Six presets
LCD Display	High visibility LCD display with 16 x 2 characters
Amplifier Freq range	80 Hz to 20 kHz
Amplifier Power	3.4 Wrms @ 10% THD, 2.8 Wrms @ 0.1% THD
Power supply	230V AC to 12V DC external power adapter.
Approvals	CE marked. Compliant with the EMC and Low Voltage Directives (89/336/EEC and 73/23/EEC)
Dimensions	210mm (width) x 175mm (height) x 110mm (depth)



Please return your registration card to the following address to validate your warranty.

PURE Digital

Imagination Technologies Ltd.,
Home Park Estate,
Kings Langley, Herts., WD4 8LZ, UK 01923 270188 fax
sales@pure-digital.com 01923 277488 sales
support@pure-digital.com 01923 277477 support & service

www.pure-digital.com